

POLYMERIC ADDITIVES AND
POLYMERIC ARTICLES COMPRISING SAID ADDITIVE
Abstract of the Invention

- 5 We have developed a process and product which provide
thermoplastic articles featuring a permanent outer surface which has
selectively varied chemical functionality while maintaining the inherent
mechanical properties of the base fiber. The process comprises the steps
of:
- 10 (a) adding a substantially organic molten component with CSP value
of at least 0.8 to a molten thermoplastic polymer and mixing to
substantially uniformly disperse the molten component in the molten
thermoplastic polymer and form a heterogeneous blend wherein
15 (i) the melt viscosity of the molten component is substantially less
than the melt viscosity of the molten thermoplastic polymer; and
 (ii) the amount of the molten component in the molten thermoplastic
polymer is up to about ten percent by weight based on the
heterogeneous blend; and
20 (b) melt processing the heterogeneous blend wherein the molten
component preferentially locates near the surface of the molten
thermoplastic polymer and substantially no chemical reaction occurs
between the molten component and the molten thermoplastic polymer.

25 The present invention provides specific surface activating polyamide
(Formula (I)) and polyolefin (Formula (II)) additives.

These additives may be used in thermoplastic polymers and more
preferably in polyester. The resulting thermoplastic blend may be used to
make articles, preferably fiber, and more preferably industrial fiber.